	Туре	L #	Hits	Search Text	DBs	Time Stamp	Comment
1	IS&R	L1	130	(310/328).CCLS.	FPRS; EPO; JPO; DERWE NT; IBM_T DB	2006/12/2 9 09:17	
2	IS&R	L2	81		FPRS; EPO; JPO; DERWE NT; IBM_T DB	2006/12/2 9 09:39	
3	IS&R	L3	72	(310/366).CCLS.	US - PGPUB	2006/12/2 9 09:42	
4	IS&R	L4	933	(310/366).CCLS.	USPAT	2006/12/2 9 09:56	
5	IS&R	L5	378	(310/365).CCLS.	USPAT	2006/12/2 9 10:06	
6	IS&R	L6	78	(310/365).CCLS.		2006/12/2 9 10:07	
7	IS&R	L7	142	(310/365).CCLS.	FPRS; EPO; JPO; DERWE NT; IBM_T DB	2006/12/2 9 10:09	
8	IS&R	L8	21	(310/363).CCLS.	FPRS; EPO; JPO; DERWE NT; IBM_T DB	2006/12/2 9 10:12	
9	IS&R	9با	48	ICTTO/TEST CCLS		2006/12/2 9 10:13	
10	IS&R	L10	217	(310/363).CCLS.	USPAT	2006/12/2 9 10:18	

	Туре	L #	Hits	Search Text	DBs	Time Stamp	Comment
11	BRS	L11	202	(piezoelectric or electrostrictive or electromechanical) adj4 (multilayer or layer\$3 or stack or plies or laminat\$4) and electrode adj3 (net or mesh or screen)	_	2006/12/2 9 10:21	

**RESULT LIST** 

Approximately 161 results found in the Worldwide database for:

piezoelectric or electrostrictive in the title AND electrode and (net or mesh or screen) in the title or abstract (Results are sorted by date of upload in database)

MULTILAYER PIEZOELECTRIC DEVICE

Inventor: NAKAMURA SHIGENOBU (JP)

Applicant: KYOCERA CORP (JP)

EC: F02M51/06A; H01L41/047; (+1)

IPC: F02M51/06; H01L41/047; H01L41/083 (+11)

Publication info: EP1675190 - 2006-06-28

LAMINATED PIEZOELECTRIC ELEMENT AND ITS MANUFACTURING

Inventor: SATO KAZUHIDE; HATTORI HIDEKAZU; (+1) Applicant: DENSO CORP

EC: H01L41/047; H01L41/083; (+1)

IPC: H01L41/083; F02M51/00; F02M51/06 (+9)

Publication info: JP2006041279 - 2006-02-09

PIEZOELECTRIC EXCITER

Inventor: KOBAYASHI KAZUHIRO; WATANABE KEITA Applicant: CITIZEN ELECTRONICS

IPC: H04R17/00; H04R17/00

Publication info: JP2006033005 - 2006-02-02

**ULTRASONIC TRANSDUCER EMPLOYING SUSPENDED** 

PIEZOELECTRIC PLATE

Inventor: Applicant: EUPHONIOS CORP (US)

EC: B06B1/06E2; G04F5/06B; (+1) IPC: H04R17/00; B06B1/06; G04F5/06 (+6)

Publication info: GB1254037 - 1971-11-17

Piezoelectric element and touch screen utilizing the same

Inventor: KATSUKI TAKASHI (JP); NAKAZAWA Applicant: FUJITSU LTD (JP)

FUMIHIKO (JP); (+2)

EC: H03H3/08; G06F3/033Z4A4; (+1) IPC: G06F3/043; G06F3/033; G06F3/041 (+17)

Publication info: US2005073505 - 2005-04-07

Piezoelectric ink-jet head and its manufacturing method

Inventor: CHEN ZHIMING (CN); CAI ZHICHANG (CN) Applicant: FEIHE SCI & TECH CO LTD (CN)

IPC: B41J2/16; B41J2/16; (IPC1-7): B41J2/16 FC:

Publication info: CN1611361 - 2005-05-04

Packed piezoelectric actuator and manufacturing method thereof

Inventor: CHEN ZHIMING (CN); TU SHENGLI (CN) Applicant: FEIHE SCIENCE & TECHNOLOGY CO (CN)

IPC: B41J2/015; H01L41/22; B41J2/015 (+3)

Publication info: CN1599089 - 2005-03-23

LAMINATED PIEZOELECTRIC DEVICE AND INJECTION EQUIPMENT

**Inventor: NAKAMURA SHIGENOBU** Applicant: KYOCERA CORP

EC: IPC: F02M51/00; F02M51/06; H01L41/083 (+15)

Publication info: JP2005072325 - 2005-03-17

PIEZOELECTRIC ELEMENT ACTUATOR AND ITS MANUFACTURING **METHOD** 

Inventor: FUTAKUCHI TOMOAKI; SAKAI YUICHI; (+3) Applicant: TOYAMA PREFECTURE; TATEYAMA KAGAKU

KOGYO KK

IPC: B41J2/16; B41J2/045; B41J2/055 (+6) EC:

Publication info: JP2004330724 - 2004-11-25

PIEZOELECTRIC OSCILLATION GYRO

Inventor: OKAMOTO KOICHI Applicant: NEC TOKIN CORP

IPC: G01P9/04; G01C19/56; H01L41/09 (+9)

Publication info: JP2004198364 - 2004-07-15

Pago-1082 tmb



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**Search Results** 

12/29/2006 - 10:59:53

Search

Query:

((piezoelectric or electrostrictive)) <AN

Query: ((piezoelectric or electrostrictive)) <AND> ( ( (stack or laminat\* or multilayer or layer\*) ) <in> abstract ) <AND> ( ( (mesh or screen or net) ) <in> claims )

10 documents out of 1894939 matched your query. Click on its number to view the details of the document.

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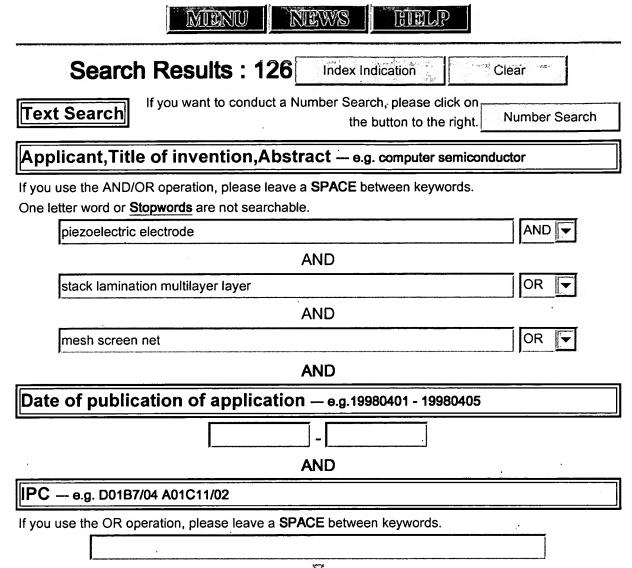
1.	<u>2542085</u>	METHODS OF PRODUCING CARBON LAYERS ON TITANIUM METAL	77%
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One letter word or Stopwords are not searchable.
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AND
stack lamination multilayer layer OR
AND
net mesh screen OR ▼
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## **Searching PAJ**



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**IP SERVICES** 



IP Services PatentScope

Patent Search

Results of searching in PCT for:

( piezoelectric or electrostrictive or actuator or electromechanical ) near ( stack or laminat\* or layer\* or multilayer ) and electrode near ( mesh or net or screen ): 3 records Showing records 1 to 3 of 3:

[Search Summary]

Refine Search [6] (piezoelectric or electrostrictive or actuator or electrome



RSS 3

Title

Pub. Date

Int. Class

**Applicant** 

1. (WO 2006/101491) FLUID CONSUMING BATTERY WITH FLUID REGULATING SYSTEM

28.09.2006

H01M 12/06

EVEREADY BATTERY COMPANY.

The invention is an electrochemical battery cell with a fluid consuming electrode, such as an oxygen reduction electrode, and a fluid regulating system. The fluid regulating system includes a valve for adjusting the rate of passage of the fluid to the fluid consuming electrode. It is operated by an actuator that responds (e.g., by deforming) to changes in a potential applied across the actuator to open or close the valve. The applied potential can be the cell potential or an adjusted potential. The potential applied across the actuator can vary according to the need for more or less fluid in the fluid consuming electrode. The valve can be contained within the cell housing, for example between the fluid consuming electrode and one or more fl...

2. (WO 2005/124918) ELECTROCHEMICAL METHODS, DEVICES, AND STRUCTURES 29.12.2005

H01M 10/04

MASSACHUSETTS INSTITUTE OF

**TECHNOLOGY** 

The present invention provides devices and structures and methods of use thereof in electrochemical actuation. This invention provides electrochemical actuators, which are based, inter-alia, on an electric field-driven intercalation or alloying of high-modulus inorganic compounds, which can produce large and reversible volume changes, providing high actuation energy density, high actuation authority and large free strain.

3. (WO 2005/055355) FLUID CONSUMING BATTERY WITH FLUID REGULATING SYSTEM 16.06.2005

H01L 41/04

EVEREADY BATTERY COMPANY,

The invention is an electrochemical battery cell with a fluid consuming electrode, such as an oxygen reduction electrode, and a fluid regulating system. The fluid regulating system includes a valve for adjusting the rate of passage of the fluid to the fluid consuming electrode. It is operated by an actuator that responds (e.g., by deforming) to changes in a potential applied across the actuator to open or close the valve. The applied potential can be the cell potential or an adjusted potential. The potential applied across the actuator can vary according to the need for more or less fluid in the fluid consuming electrode. The valve can be contained within the cell housing, for example between the fluid consuming electrode and one or more fl...

#### Search Summary

piezoelectric NEAR stack: 1214 occurrences in 287 records. piezoelectric NEAR mesh: 27 occurrences in 16 records.

(piezoelectric NEAR stack AND piezoelectric NEAR mesh): 0 records.

electrostrictive NEAR stack: 15 occurrences in 10 records. electrostrictive NEAR mesh: 0 occurrences in 0 records.

(electrostrictive NEAR stack AND electrostrictive NEAR mesh): 0 records.

((piezoelectric NEAR stack AND piezoelectric NEAR mesh) OR (electrostrictive NEAR stack AND electrostrictive

NEAR mesh)): 0 records.

actuator NEAR stack: 547 occurrences in 175 records.

actuator NEAR mesh: 21 occurrences in 13 records.

(actuator NEAR stack AND actuator NEAR mesh): 1 record.